

DEPARTMENT OF TRANSPORTATION**DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 1.28**WELDING INSPECTION REPORT****Resident Engineer:**Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-019234**Date Inspected:** 11-Jan-2011**Project Name:** SAS Superstructure**OSM Arrival Time:** 900**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1730**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** Jobsite**CWI Name:** See below**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** SAS OBG**Summary of Items Observed:**

On this date CALTRANS OSM Quality Assurance Inspector (QAI) Bert Madison was present at Yerba Buena Island in California between the times noted above for observations relative to the work being performed by American Bridge/Fluor Enterprises (AB/F) personnel at the locations noted below.

- 1). Longitudinal Stiffener (ALS) Splices at OBG Field Splice 9E/10E (SMAW)
- 2). OBG West Line Deck Access Hole Transverse Stiffener Splices (SMAW)
- 3). OBG Field Splice 8W/9W Weld ID: E2, Face A (FCAW-G)
- 4). OBG Field Splice of East Line Lifting Lug Hole Insert Weld (Fit-up and SMAW)
- 5). OBG Field Splice of West Line Deck Access Hole Insert (R-1 Repair SMAW)
- 6). OBG Field Splice 1E/2E Interior Radius Transition Areas @ Deck Corners (QA verification)

- 1). Longitudinal Stiffener (ALS) Splices at OBG Field Splice 9E/10E (SMAW)

ALS-1

The QAI periodically observed AB/F approved welder Hua Qiang Hwang (ID 2930) at OBG Field Splice 9E/10E ALS-1, performing welding of fill and cover passes per the Shielded Metal Arc Welding (SMAW) process in the 3G (vertical) position. The welding at this location was first from the South Face and when completed the QAI randomly observed back grinding and subsequent back welding of root, fill and cover passes from the North face. The QAI observed distinguishing markings on the steel adjacent to the splice, indicating that QC Mr. Von Hoff had performed magnetic particle testing of the back ground area. QC Inspector Fred Von Hoff was present periodically to monitor the progress and verify that the welding parameters were within the limits established by the approved welding Procedure Specification (WPS) identified as ABF-WPS-D1.5-1012-3. The QAI observed that the cover pass welding on the North face was complete and the work at this location appeared to be in general

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compliance with contract documents.

ALS-4

The QAI periodically observed AB/F approved welder Xiao Jian Wan (ID 9677) at OBG Field Splice 9E/10E ALS-4, performing welding of root, fill and cover passes per the Shielded Metal Arc Welding (SMAW) process in the 3G (vertical) position. The welding at this location was first from the South Face and when completed the QAI randomly observed back grinding and subsequent back welding of root and fill passes from the North face. The QAI randomly observed QC Inspector Fred Von Hoff performing Magnetic Particle Testing (MT) of the excavated area prior to back welding. The QAI randomly observed that the performance and evaluation of the MT appeared to comply with the MT procedure identified as SE-MT-CT-D1.5-101 Rev. 4. QC Inspector Fred Von Hoff was present periodically to monitor the progress and verify that the welding parameters were within the limits established by the approved welding Procedure Specification (WPS) identified as ABF-WPS-D1.5-1012-3. The QAI observed that the fill pass welding was in process and the work at this location appeared to be in general compliance with contract documents.

2). OBG West Line Deck Access Hole Transverse Stiffener Splice (SMAW)

6W PP46.5 W5

The QAI periodically observed AB/F approved welder Jorge Lopez (ID 6149) performing welding per the Shielded Metal Arc Welding (SMAW) process in the 3G (vertical) position on the East face of the OBG West Line Deck Access Hole Transverse Stiffener Splice at 6W PP46.5 W5. QC Inspector Gary Ehram was periodically present to monitor the progress and verify that the welding parameters were within the limits established by the approved welding Procedure Specification (WPS) identified as ABF-WPS-D1.5-1010 rev. 1. The welding from the East face and subsequent back grinding and welding from the West face and flush grinding was completed. The QAI observed distinguishing markings on the steel adjacent to the splice, indicating that QC Mr. Gary Ehram had performed magnetic particle testing of the back ground area. The QAI observed that the work at this location appeared to be in general compliance with contract documents.

3). OBG Field Splice 8W/9W Weld ID: E2, Face A (FCAW-G)

The QAI periodically observed AB/F approved welder Song Tao Huang (ID 3794) performing manual welding of fill and cover passes at the OBG Field Splice 8W/9W Weld ID: E2 per the Flux Cored Welding (FCAW-G) process in the 3G (vertical) position. The QAI observed QC Inspector Tony Sherwood and later in the shift, QC Inspector Gary Ehram was present periodically to monitor the progress and verify that the welding parameters were within the limits established by the approved welding Procedure Specification (WPS) identified as ABF-WPS-D1.5-3042B-1. The welding of fill and cover passes was complete. The QAI observed that the work at this location appeared to be in general compliance with contract documents.

4). OBG Field Splice of East Line Lifting Lug Hole Insert Weld (Fit-up and SMAW)

Exterior and Interior: OBG 5E PP35 E3 weld 4

The QAI periodically observed AB/F approved welder Salvador Sandoval (ID 2202) performing fit-up and welding from the exterior of OBG 5E PP35 E3 weld 4 per the Shielded Metal Arc Welding (SMAW) process in the 1G (flat) position. QC Inspector Steve McConnell was periodically present to monitor the progress and verify that the welding parameters were within the limits established by the approved welding Procedure Specification (WPS) identified as ABF-WPS-D1.5-1070. Welding was completed and the QAI observed that the work at this location appeared to be in general compliance with contract documents.

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5). OBG Field Splice of West Line Deck Access Hole Insert (R-1 Repair SMAW)

1W PP10.5 W5

The QAI periodically observed AB/F approved welder Jin Pei Wang (ID 7299) performing grinding to excavate (3) three Ultrasonic Testing (UT) reject areas. The QAI randomly observed QC Inspector John Pagliero performing Magnetic Particle Testing (MT) of the excavated area prior to back welding. The QAI randomly observed that the performance and evaluation of the MT appeared to comply with the MT procedure identified as SE-MT-CT-D1.5-101 Rev. 4. The QAI randomly observed AB/F approved welder Jin Pei Wang performing R-1 repair welding per the Shielded Metal Arc Welding (SMAW) process in the 4G (overhead) position on the interior of Deck Access Hole Insert at OBG 1W PP10.5 W5. QC Inspector John Pagliero was present to monitor the progress and verify that the welding parameters were within the limits established by the approved welding Procedure Specification (WPS) identified as ABF-WPS-D1.5-1001 Repair. Welding was completed and the QAI observed the work at this location appeared to be in general compliance with contract documents. The QAI observed that the (3) three excavated R-1 repair areas had the following dimensions and the following Y locations:

- 1). Indication Y = 3350mm, Excavation Length = 110mm, Depth = 8mm and Width = 25mm.
- 2). Indication Y = 3560mm, Excavation Length = 80mm, Depth = 5mm and Width = 20mm.
- 3). Indication Y = 3820mm, Excavation Length = 70mm, Depth = 5mm and Width = 20mm.

6). OBG Field Splice 1E/2E Interior Radius Transition Areas @ Deck Corners (QA verification)

The QAI performed verification Ultrasonic Testing (UT) of the weld at the termination of the backing bar at OBG Field Splice 1E/2E, A1@E2 and A5@E5. The testing at these locations was to ensure fusion to the backing bar per RFI 2097 and attachment. The welds at the termination of the backing bar at A1/E2 and A5/E5 verified by the QAI appeared to be in general compliance with the requirements of the procedure outlined by RFI.2097.

Summary of Conversations:

Conversations on this date with Quality Control Inspectors were general in nature and pertained to locations of welding and QC activities.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Nina Choy (510) 385 5910, who represents the Office of Structural Materials for your project.

Inspected By:	Madison,Bert	Quality Assurance Inspector
Reviewed By:	Levell,Bill	QA Reviewer
